

Attorney's Docket No.: 06618-914001

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Previously Presented) A pump as in claim 21, wherein said housing and cathode structure is formed of titanium.

3. (Previously Presented) A pump as in claim 21, wherein said magnet is formed in a substantially C shape.

4. (Previously Presented) A pump as in claim 3, wherein said magnet is formed of one of vanadium permendur magnetic material.

5-8. (Cancelled)

9. (Previously Presented) A pump as in claim 21, further comprising a voltage source, which applies a voltage potential between said anode and said housing.

10. (Cancelled)

Attorney's Docket No.: 06618-914001

11. (Previously Presented) An ion pump as in claim 21, wherein said magnetic field extends along a direction that is coaxial with said axis of said anode.

12. (Currently Amended) An ion pump as in claim 21, further comprising a GCMS—a system receiving its ~~vacuum~~ vacuum from said ion pump.

13. (Previously Presented) An ion pump as in claim 21, wherein said magnet is formed of a high energy product value magnet.

14-20. (Cancelled)

21. (Currently Amended) An ion pump comprising:  
a plurality of anodes, which are substantially cylindrical, and which have first and second open ends;

a combined housing and cathode structure, formed of a cathode material, forming a vacuum tight seal, and having a connection for a vessel to be evacuated, said housing and cathode structure forming a plurality of surrounding surfaces that surround said anodes on all sides of the anodes, and having a plurality of extending surfaces, extending into the vacuum

Attorney's Docket No.: 06618-914001

tight sealed area and into insides of said anodes from both said first and second open ends, from said surrounding surfaces;

a magnet, surrounding at least a portion of said cathode and housing structure; and

a connection for a voltage source of a type which allows pumping by the ion pump.

22. (Previously Presented) An ion pump as in claim 21, wherein both said housing, and said plurality of extending surfaces, are both formed of titanium.